

Appl. No. 09/935,088
Amdt. dated Jan. 26, 2004
Reply to Office Action of Oct. 30, 2003

REMARKS/ARGUMENTS

Pursuant to 37 C.F.R. § 1.111, reconsideration of the present application in view of the foregoing amendments and the following remarks is respectfully requested.

In the Specification

The paragraphs beginning at page 3, line 18 and page 12, line 22 have been amended to cancel matter that the Examiner contends to be new matter. The current amendments return the amended paragraphs to their originally submitted form.

In the Claims

Claims 1 - 6 and 8 - 19 are presented for the Examiner's consideration.

Claims 1, 15 and 19 have been amended to remove language relying on portions of the specification the Examiner contends to be new matter. Claims 1, 15 and 19 have also been amended for clarity to reflect the language of the specification (see paragraph beginning at page 12, line 22).

Claims 1 and 19 have also been amended to reinforce that the superabsorbent is contained in micro-pockets formed in the nonwoven material. Claims 1 and 19 have been amended to more particularly point out that the micro-pockets are formed by creping or compression in the case of claim 1 or by creping in the case of claim 19 (see specification at page 9, line 14 through page 12, line 4).

Claim 19 has been further amended to incorporate the subject matter of claim 20. Claim 20 has been cancelled.

Summary of the Invention

This invention relates to a single-layer nonwoven material for personal care products capable of containing superabsorbent having a mixture of polymeric fibers, binder and superabsorbent. The binder is present in an amount between 1 and 6 weight percent based on the weight of the web before superabsorbent is added. The superabsorbent is added to the fiber and binder in an amount between 1 to 80 weight percent of the web. The superabsorbent is preferably in the form of particles (SAP). The SAP is placed in micro-pockets formed by various means like creping or the mechanical creation of depressions in the surface of the nonwoven using a pattern roll. The volume of these micro-pockets may be between 0.33 and 10 cubic millimeters. With this

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construction the web remains permeable to liquids before and after wetting. The web should have a permeability above 1500 darcys.

Regarding Examiner's objection to the specification

By way of the Office Action mailed October 30, 2003, Examiner Pierce objected to the amendments filed September 12, 2003 under 35 U.S.C. 132 as introducing new matter. Specifically, the Examiner contends that the addition of "(based on the fibers and binder weight)" in the paragraph beginning at page 3, line 18 and the addition of "fibers and binder" in the paragraph beginning at page 12, line 22 are new matter.

Applicant has addressed the Examiner's objection by deleting the phrases that the Examiner contends to be new matter.

Regarding Examiner's rejections

1. Rejection regarding written description requirement

By way of the Office Action mailed October 30, 2003, Examiner Pierce rejected claims 1 – 6 and 8 – 20 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner contends that claim 1 – 6 and 8 – 18 fail to comply with the written description requirement because the independent claims disclose the binder is present in an amount "between 1 and 6 weight percent of the fiber and binder" and that the superabsorbent is present in an amount "between 1 and 80 weight percent of the fiber and binder." Both limitations are contended to be based on new matter added to the specification.

Applicant has addressed the Examiner's rejection by removing the language from claims 1 and 15 that the Examiner contends to have been based on new matter. The Applicant respectfully requests that the Examiner withdraw the written description rejection of claims 1 – 6 and 8 – 18.

Additionally, the Examiner contends that claims 19 and 20 fails to comply with the written description requirements as there is no support for "continuous fibers" in the specification.

Applicant has amended claim 19 to replace the limitation of "continuous" with the subject matter of claim 20, as supported by the Examples of the specification (see page 16) and claim 20 as originally submitted. Claim 20 has been canceled. Applicant respectfully requests that the Examiner withdraw the written description rejection of claim 19.

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2. Rejection for obviousness by Tanzer et al. in view of Onuschak et al.

By way of the Office Action mailed October 30, 2003, Examiner Pierce rejected claims 1 - 6, 8 - 13, and 15 - 18 under 35 U.S.C. §103(a) as allegedly being obvious to one of ordinary skill in the art at the time the invention was made and thus unpatentable over Tanzer et al. (U.S. Patent No. 5,562,645) in view of Onuschak et al. (U.S. Patent No. 6,139,912). This rejection is respectfully traversed to the extent that it may apply to the present claims.

The pockets of Tanzer are formed between multiple layers of material (column 20, line 42-46). Tanzer teaches by reference (column 20, line 48 -55) the pockets of U.S. Patent Application Ser. No. 145,926 of Tanzer et al., which was filed Oct. 29, 1993. A continuation of this application, filed on Jan. 6, 1995, was granted as U.S. Patent 5,593,399. The pockets, as taught and claimed by '399, are formed by the lamination of at least two carrier layers (see claim 1; column 4, lines 42 - 56; paragraph bridging columns 13 and 14). These layers are unattached in regions that are completely surrounded by regions that surround and separate the unattached regions. These unattached regions are the pockets that quantities of superabsorbent are segregated (see column 14, lines 8 -22).

The present invention is distinguishable in that it defines micro-pockets to be small pockets, having a volume of only a few cubic millimeters or less, formed in the single-layer nonwoven web (see page 6, lines 6 - 8). Such micro-pockets are just large enough to allow entry of and storage for individual particles of superabsorbent. Unlike Tanzer, the present invention does not use a second layer to form pockets to contain the superabsorbent. Instead, the invention forms pockets within its single layer made up of fiber and binder (see claims 1 and 15). Thus, the present invention of micro-pockets formed by creping or depressions in the single-layer is nonobvious, in the sense of 35 U.S.C. § 103(a), in view of the multi-layer formation of the pockets in Tanzer.

More particularly, the Examiner contends that in view of Onuschak et al. the size of the pockets is a results effective variable and it would have been obvious to one of ordinary skill in the art to make the pockets of Tanzer between 0.5 and 5 cubic millimeters, since discovering an optimum value of a result effective variable involves only routine skill in the art under the ruling of *In re Boesch*. Likewise, the Examiner contends that the permeability is also a result effective variable and it would have been obvious to one skilled in the art to optimize the permeability of the Tanzer material to a level of at least 2000 darcys.

As the Examiner has acknowledged, Tanzer does not disclose or teach either the volume of its pockets or the permeability of the material. As discussed above, the present invention has micro-pockets of a very small size and has a single-layer structure rather than the multiple layer

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structure of Tanzer. The structure of the present invention is nonobvious in view of Tanzer. Therefore, neither the pocket volume nor the permeability would be result effective variables and it would not be obvious, in the sense of 35 U.S.C. § 103(a), to merely optimize the size of the pockets or the level of permeability in Tanzer.

Applicant respectfully submits that the rejection of claims 1 - 6, 8 - 13, and 15 - 18 under 35 U.S.C. §103(a) by Tanzer in view of Onuschak is improper and should be withdrawn.

3. Rejection for obviousness by Tanzer et al. in view of Onuschak et al. and further in view of Shohji et al.

By way of the Office Action mailed October 30, 2003, Examiner Pierce rejected claims 14 and 16 under 35 U.S.C. § 103(a) as allegedly being obvious to one of ordinary skill in the art at the time the invention was made and thus unpatentable over Tanzer et al. (U.S. Patent No. 5,562,645) in view of Onuschak et al. (U.S. Patent No. 6,139,912), and further in view of Shohji et al. (U.S. Patent No. 5,549,964). This rejection is respectfully traversed to the extent that it may apply to the present claims.

Claims 14 and 16 depend directly from claims 1 and 15, respectively, which Applicant has discussed above. Claims 14 and 16 are similarly distinguishable from Tanzer in view of Onuschak and further in view of Shohji. For the same reasons as discussed above, Tanzer is not an appropriate reference for an obviousness rejection.

Furthermore, as the Examiner has pointed out, Tanzer does not disclose electret treatment of the web. Shohji mentions that electret treatment would improve the filtering properties of the nonwoven invention of Shohji. The Examiner suggests that one skilled in the art would be motivated to provide the electret treatment of Shohji to the material of Tanzer to improve the filtering of waste fluid components that enter the product of Tanzer.

However, the present invention seeks to use electret treatment, as an alternative to using an adhesive, to further encourage superabsorbent to remain within the inventive fabric (see page 12, lines 1 - 4). One skilled in the art, seeking to keep superabsorbent in place, would not be motivated to look to art regarding improvement of filtration properties or the filtering of waste fluid components that enter the product. Therefore, there is no motivation to combine the references.

Thus, Applicant respectfully asks that the obviousness rejection of claims 14 and 16 under 35 U.S.C. § 103(a) be withdrawn.

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4. Rejection for obviousness by Tanzer et al. in view of Onuschak et al. and further in view of Melius et al.

By way of the Office Action mailed October 30, 2003, Examiner Pierce rejected claims 19 and 20 under 35 U.S.C. §103(a) as allegedly being obvious to one of ordinary skill in the art at the time the invention was made and thus unpatentable over Tanzer et al. (U.S. Patent No. 5,562,645) in view of Onuschak et al. (U.S. Patent No. 6,139,912) and further in view of Melius et al. (U.S. Patent No. 5,601,542). This rejection is respectfully **traversed** to the extent that it may apply to the present claims.

As discussed above regarding claims 1 and 15, claim 19 is similarly distinguishable from Tanzer in view of Onuschak and further in view of Melius. Claim 20 has been canceled. For the same reasons as discussed above and in addition because claim 19 as amended requires pockets formed by creping, Tanzer is not an appropriate reference for an obviousness rejection. Therefore, the obviousness rejection of claim 19 under 35 U.S.C. §103(a) by Tanzer in view of Onuschak and further in view of Melius is improper and should be withdrawn.

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For the reasons stated above, it is respectfully submitted that all of the present claims are in form for allowance.

Please charge any prosecutorial fees which are due to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875.

The undersigned may be reached at: (770) 597-8096.

Respectfully submitted,

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CERTIFICATE OF FACSIMILE TRANSMISSION

I, Nathan Hendon, hereby certify that on January 26, 2004, this document is being sent by facsimile to the United States Patent and Trademark Office, central facsimile number for all patent application related correspondence, at 703-872-9306.

By: 

Nathan Hendon